

Delete the third full paragraph at page 13, line 8, and insert the following:

D4 Sur E2 ~~FIGURES 13B-13J. Nucleotide sequence for pICAST OMN (SEQ. ID NO: 5).--~~

IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) A method of assessing the effect of a test condition on G-protein-coupled receptor (GPCR) pathway activity, comprising:

DS a) providing a cell that expresses a GPCR as a fusion protein to a first mutant form of a reporter enzyme and an interacting protein partner as a fusion protein to a second mutant form of the reporter enzyme;

b) exposing the cell to a ligand for said GPCR under said test condition; and

c) detecting enzymatic activity of the reporter enzyme;

wherein increased reporter enzyme activity in the cell compared to that which occurs in the absence of said test condition indicates increased GPCR interaction with its interacting protein partner compared to that which occurs in the absence of said test condition, and decreased reporter enzyme activity in the cell compared to that which occurs in the absence of said test condition indicates decreased GPCR interaction with its interacting protein partner compared to that which occurs in the absence of said test condition.

Db 9. (Amended) A method for screening a β -arrestin protein for the ability to bind to activated GPCRs, comprising:

a) providing a cell that:

i) ~~expresses at least one GPCR as a fusion protein to a first mutant form of a~~
reporter enzyme; and

ii) contains a conjugate comprising a test β -arrestin protein as a fusion protein with a second mutant form of the reporter enzyme;

b) exposing the cell to a ligand for said at least one GPCR; and

c) detecting enzymatic activity of the reporter enzyme;

wherein an increase in enzymatic activity in the cell indicates β -arrestin protein binding to the activated GPCR.

10. (Amended) A method for screening a test compound for G-protein-coupled receptor (GPCR) agonist activity, comprising:

a) providing a cell that expresses a GPCR as a fusion protein to a first mutant form of a reporter enzyme and an arrestin protein as a fusion protein to a second mutant form of the reporter enzyme;

b) exposing the cell to a test compound; and

c) detecting enzymatic activity of the reporter enzyme;

wherein increased reporter enzyme activity after exposure of the cell to the test compound indicates GPCR agonist activity of the test compound.

18. (Amended) A method of screening a test compound for G-protein-coupled receptor (GPCR) antagonist activity, comprising:

a) providing a cell that expresses a GPCR as a fusion protein to a first mutant form of a reporter enzyme and an arrestin protein as a fusion protein to a second mutant form of the reporter enzyme;

b) exposing the cell to said test compound;

~~c) exposing the cell to an agonist for said GPCR; and~~

d) detecting complementation of said reporter enzyme;

where exposure to the agonist occurs at the same time as, or subsequent to, exposure to

Cont
p7

the test compound, and wherein decreased reporter enzyme activity after exposure of the cell to the test compound indicates that the test compound is an antagonist for said GPCR.

Please add the following new claims:

Sub E3
-- 38. (New) The method of Claim 10, wherein the GPCR and the first mutant form of reporter enzyme are linked together by a polypeptide linker represented by the formula -
(GGGGS)_n-.

18
39. (New) The method of Claim 38, wherein n is 2 or more.

40. (New) The method of Claim 38, wherein n is 4.

41. (New) The method of Claim 10, wherein the second mutant form of the reporter enzyme is linked to the C-terminal of the arrestin protein.

42. (New) The method of Claim 1, wherein the protein partner is an arrestin.

Sub E4
43. (New) The method of Claim 42, wherein the GPCR and the first mutant form of reporter enzyme are linked together by a polypeptide linker represented by the formula -
(GGGGS)_n-.

44. (New) The method of Claim 43, wherein n is 2 or more.

45. (New) The method of Claim 43, wherein n is 4.

46. (New) The method of Claim 42, wherein the second mutant form of the reporter enzyme is linked to the C-terminal of the arrestin protein.

Sub E5
47. (New) The method of Claim 9, wherein the GPCR and the first mutant form of reporter enzyme are linked together by a polypeptide linker represented by the formula -
(GGGGS)_n-.

48. (New) The method of Claim 47, wherein n is 2 or more.

49. (New) The method of Claim 47, wherein n is 4.